

What is claimed is:

1. An isolated polynucleotide comprising a polynucleotide selected from the group consisting of:
 - 5 (a) a polynucleotide encoding the polypeptide consisting of the amino acid sequence of SEQ ID NO:2;
 - (b) a polynucleotide consisting of SEQ ID NO:1;
 - (c) a polynucleotide having at least about 90% sequence identity to the polynucleotide of (a) or (b).
- 10 2. The isolated polynucleotide of claim 1, which comprises a polynucleotide having at least about 90% sequence identity to SEQ ID NO: 1.
- 15 3. The isolated polynucleotide of claim 1, which comprises a polynucleotide having at least about 90% sequence identity to a polynucleotide encoding the polypeptide as set forth in SEQ ID NO:2.
- 20 4. The isolated polynucleotide of claim 1, which comprises a polynucleotide having at least about 95% sequence identity to a polynucleotide encoding SEQ ID NO:2.
- 25 5. The isolated polynucleotide of claim 1, which comprises a polynucleotide encoding SEQ ID NO:2.
6. The polynucleotide of claim 1, wherein said polynucleotide comprises SEQ ID NO:1.
7. The polynucleotide of claim 1, wherein said polynucleotide sequence encodes the polypeptide of SEQ ID NO:2.
- 30 8. The polynucleotide of claim 1, which is a DNA or RNA.
9. A fragment of the polynucleotide of SEQ ID NO:1.

10. An expression vector comprising the isolated polynucleotide of claim 1.
11. A host cell comprising the expression vector of claim 10.
5
12. The host cell of claim 10, which is a mammalian cell.
13. The host cell of claim 10, wherein the mammalian cell is a CHO cell.
- 10 14. The host cell of claim 10, which is a eukaryotic cell.
15. An antibody that selectively binds a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or a fragment thereof.
- 15 16. A process for producing the polypeptide comprising SEQ ID NO: 2 comprising: culturing a host cell of claim 11 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture.
- 20 17. A process for producing cells capable of expressing a polypeptide comprising genetically transfected or transforming cells with the vector of claim 10.
18. A process for producing a human EDG8 polypeptide or a fragment thereof comprising: culturing a host cell of claim 11 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture.
25
19. A polynucleotide which is a complement of a polynucleotide of claim 1.
20. A process for diagnosing a disease or a susceptibility to a disease related to expression or activity of human EDG8 polypeptide comprising:
30
- determining the presence or absence of mutation in the nucleotide sequence encoding said human EDG8 polypeptide in the genome of said subject; and/or

analyzing for the presence or amount of the human EDG8 polypeptide expression in a sample derived from said subject.

21. A method for identifying compounds which bind to human EDG8 polypeptide
5 comprising:
 - a) contacting a cell as claimed in claim 18 or a part thereof with a candidate compound; and
 - b) assessing the ability of said candidate compound to bind to said cells.
- 10 22. The method as claimed in claim 21 which further includes determining whether the candidate compound effects a signal generated by activation of the human EDG8 polypeptide at the surface of the cell, wherein a candidate compound which effects production of said signal is identified as an agonist.
- 15 23. The method as claimed in claim 21 which further includes determining whether the candidate compound effects a signal generated by activation of the human EDG8 polypeptide at the surface of the cell, wherein a candidate compound which effects production of said signal is identified as an antagonist.
- 20 24. An agonist identified by the method of claim 22.
- 25 26. The method of claim 21 which further includes contacting said cell with a known agonist for said human EDG8 polypeptide; and determining whether the signal generated by said agonist is diminished in the presence of said candidate compound, wherein a candidate compound which effects a diminution in said signal is identified as an antagonist for said human EDG8 polypeptide.
- 30 27. A method as claimed in claim 26, wherein the known agonist is S1P, LPA and/or dHS1P.

28. An antagonist identified by the method of claim 26.
29. A method of preparing a pharmaceutical composition comprising:
- 5 a) identifying a compound which is an agonist or an antagonist of human EDG8,
- b) preparing the compound, and
- c) optionally mixing the compound with suitable additives.
30. A pharmaceutical composition prepared by a method of claim 29.
- 10 31. A pharmaceutical composition comprising human EDG8 polypeptide or a fragment thereof wherein said fragment has human EDG8 biological activity.
- 15 32. A pharmaceutical composition containing a polynucleotide encoding for human EDG8 or a fragment thereof encoding for a peptide with human EDG8 biological activity.